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ORIGINAL.

ENDOMETRITIS*

BY F. R. BURNHAM, M.D., SAN DIEGO,
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The thoughtful physicians of to-day cannot but be impressed with the feeling that as a profession, we have made slow progress in the treatment of diseases peculiar to women. As surgeons, wonders have been accomplished in saving the wrecks passed over to them from our helpless hands, from complete destruction. But what about the poor woman, her life has been saved, but at what a cost? She has been robbed of the greatest blessing, and the most cherished wish of her life, the ability to bear children. But is woman the only sufferer from this wholesale unsexing of her kind? Parts of our anatomy not used are taken away from us. Dame nature seems to consider that anything we do not utilize is not needed, and as she is averse to carrying dead freight

she drops it out. If we continue to remove ovaries in the future, as we have in the past few years, how long will it be before nature will drop out the ovaries as useless freight? This will not occur in one generation nor in one hundred probably, for nature is very patient and forbearing with our ignorance, but as surely as the teeth are going, so surely will the ovaries go if the highest attainment of our art be to exhibit them in jars on our laboratory shelves. Add to this the unsexing that woman brings upon herself by criminal abortions, and the problem becomes a grave one. Add to this again the destruction of the reproductive function that is being spread broadcast by men through acute and chronic gonorrhea, and we begin to realize that while our science has saved the human race from the destruction by pestilence and plague, a more fatal danger threatens through the destruction of the reproductive organs. France, the most cultured nation of modern times, is going to the wall, because her deaths equal or exceed her births. In one form or another has this not been one of the

*Read at San Diego meeting of the Southern California Medical Society.

underlying causes of the destruction of the nations of antiquities? In this argument I am not trying to find the surgeon guilty, but rather to find some way of preventing the disease of the sexual organs for the removal of which the surgeon's knife must be applied. In casting about to find the starting point of the disease that results in so much destruction, it seems to me that to acute and chronic inflammation of the mucous membrane of the uterus, we can trace much of woman's suffering, and the cause of a large part of the diseases of the sexual organs. Endometritis! How familiar it sounds to those of us who have been in the harness for many years. How many battles have we fought, with caustic, knife, curette sponge tents, steel dilators, etc. How many defeats suffered; how few victories won; how many mistakes has kind Mother Earth covered from sight. In filth, and in cleanliness, we have burned, scraped and cut open, sewed up, and to-day, with much weariness of mind and some doubts as to the future, we have about reached the point where we will neither cut, sew, scrape or burn; in the slang of the day, we are obliged to confess that we are "up against it," and have turned to the surgeon and said, take everything out, it is the only remedy. In endometritis we find a disease which if not cured often leads to the involvement of the tubes, ovaries, peritoneum and pelvic cellular tissue. Dr. Gill Wylie says: "It is probable that disease of the Fallopian tubes is in most cases caused by the extension of disease, or the passage of septic material from the cavity of the uterus directly into the tubes. Thus a catarrhal or specific endometritis may pass from the lining membrane of the uterus directly to the

tubes." I think it will be conceded that the path of infection resulting in nearly all inflammatory diseases of the pelvic organs and tissues is by way of the uterus. Here then is the door we should guard, and try to prevent the extension of disease to those organs which if once organically involved, can only be cured by removal. Most writers agree that endometritis may and does affect females of all ages, though much less frequently in girls and unmarried virgins. Dr. Howard Kelly dissents from this opinion, and says, "a case of endometritis in a person who was undoubtedly a virgin, and who had not been subjected to previous local instrumentation was never seen." I find no other author making such a sweeping denial; on the contrary many think it occurs quite frequently, and is the cause of dysmenorrhea and menorrhagia from which so many young girls suffer.

Acute endometritis arises very frequently from septic infection after labor and abortion, direct injury from instrumental, simple and specific vaginitis. The sudden suppression of the menses from sudden cold, overwork, nervous worry, etc., the acute form in many cases eventuates in the chronic. I am inclined to believe that a very large percentage of our cases of chronic endometritis, are the sequela of puerperal infection. While some of our older men, and nearly all of the younger practitioners, are conducting their cases of labor in a thoroughly aseptic manner, yet I doubt if more than one case in ten, outside the hospitals, on the average receives such treatment. Many of us who try to be correct, get careless at times, and a little rise of temperature is a warning that the nurse or doctor has failed in technique somewhere, and we sud-

denly realize that we have failed in our full duty to our patient. I wonder how many of us fully realize that in a little septic fever a fire has been lighted, that may follow our patient through life. Dr. Cook in his little book on "Obstetric Technique," says: "Better let the toe be chopped off with an ax, the bone allowed to slough out and the wound to heal by granulation, than subject one woman to even a mild puerperal infection, that will transform her from a strong, healthy being to a confirmed invalid, a burden to herself, her husband, and her family." This is not a picture of the imagination, but is the experience of daily life. It is almost a daily occurrence for women to tell us that they have not seen a well day since their child was born. Gonorrhea is another prolific cause of endometritis. The history of a large percentage of dispensary cases of salpingitis, ovaritis, etc., reveals the gonococcus as the mischief maker, and the broad highway of his travels is through the uterus and tubes. How many men once infected with gonorrhea are completely cured? Probably it is safe to say not more than one-half. The other half are the subjects of latent gonorrhea, and if they marry, sooner or later, will infect their wives. A recent writer in "Sajou's Annual" says: "Of three hundred women who had been married for at least a year without becoming pregnant, seventy-two had been married ten years or over; the others three years. On an average of fifty of these women's husbands, thirty-eight had had gonorrhea and thirty-four had infected their wives. According to this ratio in the whole number of husbands, there must have been 235 who had had gonorrhea, and 210 had affected their wives, an inference that

is supported by the fact that in 198 of the women, the same inflammatory lesions were found as in the thirty-four who were known to have contracted the disease from their husbands." Another writer in the same book says that "as a rule the joint appearance of endometritis and inflammatory diseases of the adnexa bespeaks gonorrhea." Dr. Woeggoreth makes the bold statement that out of every one hundred women who marry husbands who have previously had gonorrhea scarcely ten remain healthy. A recent report of the special committee of the section on State Medicine of the American Medical Association, in relation to this matter says: "The weight of evidence bears unmistakably toward the conclusion that gonococcal infection is a very considerable factor in the causation of inflammatory diseases of the pelvic organs of the female and that as Peterson aptly remarks, the more the disease is studied in women and the greater the improvement in bacteriology, the higher is to be found this percentage." There seems to be two chief forms of chronic endometritis. Chronic interstitial endometritis and chronic glandular endometritis. In the former, the interglandular tissue is chiefly involved. The spaces between the glands are infiltrated with connective tissue cells. In the latter of glandular endometritis, the disease affects the glandular apparatus. The utricular glands become much elongated, twisted, paunched and increased in number. The two forms are also mixed and the same uterus may present the glandular, the interstitial and the mixed forms of inflammation in different parts at the same time. After inflammation has continued for some time, the normal appearance of

the healthy endometrium is entirely changed, while in the healthy state, the endometrium is only one millimeter in thickness. In the progress of chronic endometritis it may be increased one, two or three times in thickness and sometimes as much as one-half an inch. When it reaches this great thickness it is called fungous endometritis. In some cases, in the glandular form, the hypertrophied mucous membrane is localized and projects into the uterus in the shape of polypoid growths. Chronic endometritis is always accompanied by more or less inflammation of the muscular coats of the uterus. Until the later stages the uterus is enlarged in all directions. Now what is the condition we have to treat in most cases of chronic endometritis? We have an enlarged organ. The interglandular tissue is filled with connective tissue cells, partly organized, the uterular glands plugged, enlarged, increased in number and the normal secretion destroyed, and the mucous membrane enormously increased in thickness "as one writer has described it, we have the debris of the bacterio-phagocytic contest to deal with." The symptoms of this disease are sometimes obscured because so frequently associated with other diseases as, subinvolution, displacements, lacerated cervix, etc. Generally the woman is sterile, weak, nervous, complains of pain in the back and legs, an inability to be on her feet for any length of time, pain in the top of the head, and inability to sleep.

Examination finds the uterus enlarged, tender, the external os gaping, and if it is involved, granular degeneration over its vaginal surface with a thick tenacious discharge, the sound reveals the internal os open and the

mucous membrane bleeding with the slightest provocation. If the thick tenacious mucous be removed from the external os a thin, glairy, mucous tinged with blood, will be found to come from the internal. As for diagnostic purposes, I have found it a great help, particularly in women near the menopause where cancer may appear, to remove some of the mucous membrane with either a dull or sharp curette for examination under the microscope. To successfully treat chronic endometritis, the woman's general condition must be taken into consideration. In the first place, her surroundings and former habits of life, so far as possible, for a time must be changed, and a new environment created for her. We have two distinct classes of cases, one is the overworked woman in the care of a large family, with the double drain of hard labor and frequent parturition. The other class is the society woman, who will not have children, but usually has frequent abortions, and spends her time in the frivolities of what is known as society. The former class must be relieved of her family cares and given a complete physical rest. The latter must also have a rest from excitement, late hours and unhygienic dress, etc. The constitutional treatment is quite as necessary as the local. The diet should be carefully regulated, long quiet hours of sleep should be insisted upon. Of drugs viburnum prunifolium and opulus, with the bromides, and in anemic cases iron with massage. If the cervix is involved, this should be first treated. If a deep laceration with granular degeneration of the mucous membrane exist, probably the best way is to repair the cervix or amputate, and this will also help the subinvolution

which usually accompanies. The inflammation if it has not proceeded too far, is much improved, and the general condition, helped by the application of iodine to the cervix and vault of the vagina with glycerine tampons, and large hot vaginal douches. I have never been able to do much good by the application of caustics to the endometrium. Nothing but thorough curetage under careful asepsis with confinement in bed for some time after will do good, and in my hands this too often fails. The question then arises what next?

A drowning man catches at a straw. In cases that we have tried and failed we are willing to try almost anything that will not harm our patient, if it offers a hope of cure. I believe in electricity. We have here a remedy that may be used with safety and often great benefit in cases of chronic endometritis. The exact dosage and application is much better understood than a few years ago.

Men like Apostoli, Gaullet, Massey and others are doing work in gynecology that claims respectful consideration and not sneers. In chronic endometritis, the indication lies in the necessity for arousing and maintaining more vigorous trophic processes on the part of nature so long overwhelmed by foreign forces. Prof. Dolbear unquestionably gives the true basis of the medical value of electricity when he says by its use we have a means of altering at will the molecular activities, the selective chemistry of both superficial and deep-seated parts of the body, and this is done, not by the addition of foreign substance or even a foreign force to the body, but by a simple alteration of its cellular activity, on which all organic functions depend. Electricity

like heat and chemic action are inherent properties of matter. They are but manifestations of atomic energy which are constantly present in the interchange of atoms in the molecular activities incident to life. The higher the form of tissue, the greater the amount of energy absorbed in cellular activities. The trouble is with the cells not the organs and the trouble with the cells is instability due to the lack of available energy. If by the use of electricity, we can increase the cellular activity, if the diseased process has not gone too far, we have good reason to hope to restore normal function and tissue. The mistake is often made in expecting too rapid results. We can afford to go slow when thereby we may be able to save important organs.

BETA-EUCAINE AS AN ANÆSTHETIC.

BY JOHN MOIR, L. R. C. P. ED. AND
L. R. C. S. ED.

Beta-Eucaine has been somewhat recently introduced by E. Schering, of Berlin, in place of Alpha-Eucaine, which in practice was found to be likely to cause a considerable amount of irritation and consequent discomfort; it is also less toxic in its action, and quite equal in anæsthetic properties to either cocaine or Alpha-Eucaine. It is now therefore recommended that Beta-Eucaine only should be used in eye cases, dentistry, and in the surgical treatment of the genito-urinary tract.

It has been said that Eucaine possesses no advantages as an anæsthetic over cocaine in cases where intraspinal injection is required, but the elaborate table published in *The Therapist* in May of the present year, with

its minute details, carefully tabulated cases, and the explanatory monograph accompanying, proves absolutely that this is not so. Further researches also from other sources published in *The Therapist*, June 15th, 1901, confirm and strengthen this fact; and there cannot be a shadow of a doubt in the mind of any candid observer that as an anæsthetic for injection into the spinal cord, in all cases requiring such treatment, Beta-Eucaine possesses undoubted advantages over cocaine, and should always have the preference, being less toxic and less irritating, whilst, at the same time, it is equally effective in producing anæsthesia. In the cases of patients who have also been under the influence of chloroform, they have in many instances expressed their preference for Beta-Eucaine injection, on account of its less unpleasant after-effects.

Mr. F. C. Wallis, M.B., F.R.C.S., Assistant-Surgeon to Charing Cross Hospital and Surgeon to the Metropolitan Hospital (*St. Bartholomew's Hospital Journal*, Aug., 1897), states that his experience of its effect, when used hypodermically by him very frequently at St. Mark's Hospital, and also to a less extent at Charing Cross Hospital, is very satisfactory; he lays particular stress upon the following points: (1) The strength of the solution (4 per cent.). (2) The preparation of the solution and duration of its efficacy. It should always be *sterilized by boiling*, and will be effective for a week. (3) The amount injected, usually 1 to $1\frac{1}{2}$ drms. up to $3\frac{1}{2}$ to 4 drms., may be injected subcutaneously with benefit and perfect safety. (4) The method of injection. The syringe should be one with the needle to *screw on to the nozzle*, to which a washer is attached, and thoroughly sterilized

before using; at the same time, no other anæsthetic, such as morphine or cocaine, should be used in it. It should be reserved exclusively for the Beta-Eucaine 4 per cent. solution. With these precautions—thorough sterilization of the Eucaine by boiling, a properly aseptic sterilized syringe, with a nozzle screw, and the syringe used with no other anæsthetic—blood poisoning, or other inflammatory symptoms, or subsequent bad consequences cannot arise. (5) The extent of operation possible. In a case of umbilical hernia, with suppurating sac, the operation lasted over thirty-five minutes, and the closure of a colotomy wound took fifty-nine minutes; in either case was there any after-vomiting; so that the range as measured by these and other cases is undoubtedly large. In the last case also 6 drms. of the 4 per cent. solution were used without any kind of toxic effect whatever. The effects of the first lot of Eucaine lasted fifty-four minutes, and the last amount was used for putting the sutures in the skin. (6) After-effects none. Eucaine is cheaper than cocaine, safer, quite as good an anæsthetic, and has no cumulative effects, nor has it yet been known to cause such intolerable craving for it as cocaine and morphine, with insomnia, nervous irritability, and want of will-power, in many cases making life an intolerable burden to the patient and his friends, and his last state worse than his first. It is 3.75 times less toxic than cocaine, and has not the dangers or after-results so frequently induced by repeated morphine injections. The subsequent terrible depression after these others has not been observed in the administration of Beta-Eucaine injections, and therefore, of course, not in the milder

forms of its application as drops or topical solution applied to a hollow tooth or aching nerve, earache, or inflammations of the eye. It is a safe and reliable anæsthetic. In the words of G. W. Spencer, M.D., Philadelphia, Demonstrator of Surgery, Jefferson Medical College (*University Medical Magazine*, Nov., 1896): "Eucaine is a valuable addition to our resources. It is rapid in action, safe, produces positive and prolonged anæsthesia, causes no serious after-effects, and can be rendered aseptic by boiling. It is the best local anæsthesia before the profession." This being the case, particularly in its having no serious after-effects, it cannot produce any moral perversion of the intellect, amounting in some cases to genuine insanity, such as is frequently induced by the use of morphine and cocaine. I have used Beta-Eucaine in a considerable number of cases for affections of the eye, ear, mouth, nose, and throat, with satisfactory results in every case, relief of pain, with no after-effects, and no return of the symptoms for which it was prescribed. Professor Reclus, in the Laennec Hospital, Paris, made extensive experiments with the drug in 1898, with the result that he considers Beta-Eucaine to be a good local anæsthetic, less toxic than cocaine, and that none of the difficulties that sometimes follow the use of cocaine occur. The late Dr. Matthew Charteris, Professor of Materia Medica and Therapeutics, University of Glasgow, read a paper on this subject before the Royal Society of Edinburgh, confirming these experiments, as well as those of Berger and Vinci.

In the *British Medical Journal*, Jan. 16th, 1897, W. J. Horne, M.B., M.R.C.P. Lond., and Macleod Yearsley,

F.R.C.S. Eng., Physician and Surgeon respectively to the Farringdon General Dispensary and Lying-in Charity, London, found a 2 per cent. solution of Beta-Eucaine sufficient for topical application to cause anæsthesia of the uvula, tympanum, &c., in many of the cases in which they have given it an extensive trial. In one case, male, aged twenty-one, 7 drops of a warm 2 per cent. solution dropped into the left ear, and retained (with the head inclined to the right) for five minutes, caused complete anæsthesia of the membrana tympani lasting nearly twenty minutes. One advantage Beta-Eucaine possesses over other anæsthetics is that it causes no sickness or irritation, vertigo, syncope, or pain, so that it is not necessary to put patient to bed; they may sit up during its use, and can go home with safety after the local anæsthesiation. This is a great advantage, especially in minor cases.

It is in these latter comparatively minor cases, although painful enough, and serious enough if not overcome speedily and well, that my own experience of Beta-Eucaine has been gained, and I will now proceed to narrate a few of them, which have been followed by the test results.

Case I.—Mrs. P.; whom I recently attended in her seventh confinement, was at the same time suffering from a very severe attack of conjunctivitis and choroiditis, with photophobia and extreme pain. I used a slightly warmed 2 per cent. solution of Beta-Eucaine, with the result that it secured complete anæsthesia of the eye, and with a boric acid collyrium reduced the inflammation and effected a cure within five days after the confinement.

Case II.—Mr. McG., aged fifty-four,

a sailor, suffering from choroiditis of both eyes, was treated by me in a similar manner to Mrs. P., just referred to, and recovered perfectly in eight days; he was able to read the newspaper or a book, and to go out on the tenth day, and now, three weeks after, remains entirely free from any eye affection or weakness.

Case III.—Mrs. S., conjunctivitis of the left eye, with a slight threatening in the right eye. Used a 2 per cent. solution of Beta-Eucaine in the form of 2 or 3 drops three times a day, with the result that the attack threatened in the right eye never came to anything, and that in the left subsided in three days after the commencement of the treatment, and has not since returned.

Case IV.—Mrs. M., sciatic rheumatism of some standing. She was treated for a week with injections into the gluteus of a 4 per cent. solution of Beta-Eucaine night and morning, and received great relief from it, although she had previously tried nearly every known remedy, including morphine, without avail.

Case V.—Grace Ch., aged four and a half years, toothache. A pledget of wool soaked in a 2 per cent. solution caused anæsthesia, and gave relief each time it was applied, and on the second day the pain left, and did not return. The wool was left in for twenty minutes on each application, and then renewed occasionally whenever the pain threatened to come on.

Case VI.—William C., aged eight years, toothache. Treated in the same way as the previous case, Grace Ch., and with equally good and satisfactory results.

Case VII.—J. R., aged fifteen months, earache, right side very bad, left very slightly. A 2 per cent. so-

lution was used at bedtime on cotton-wool, and repeated once toward morning. It produced complete anæsthesia of the membrana tympani, tympanum, and ossicular chain; and although the child was in great pain when first seen, the next day there appeared to be nothing wrong, and the application has not been required to be used since.

Case VIII.—Stanley G., aged six years, otitis. Here a 4 per cent. solution was used, with complete cessation of pain and inflammation on the second day.

Case IX.—Mr. M., aged sixty-two years; also suffering from otitis, and treated with a 5 per cent. solution, with complete cessation of pain on the fourth day, and no subsequent return. He has now resumed his occupation.

Case X.—Miss C., aged nineteen years, very severe earache; also recovered in four days by the use of a 5 per cent. solution of the Beta-Eucaine; applied on pledgets of cotton-wool, and lightly retained in the outer cavity of the ear.

Case XI.—Miss M., aged twenty-three years, barmaid, suffering from severe earache and neuralgia on right side, from standing almost continuously from morning till night in the draught of a saloon-bar door. She used a 5 per cent. solution in the ear, and a warm 8 per cent. solution to bathe the face frequently during the day, with the result that at the end of three days she was again able to resume her occupation, and has not since suffered from any pain or discomfort.

Case XII.—Mr. P., carman, thirty-four years of age, suffering from otitis and neuralgia. Was treated in the same manner as in the last case, and resumed his work, which he has since

continued, on the fifth day after the commencement of the treatment.

In none of the eye cases were there any signs of my Iriasis, nor disturbance of the accommodation, nor injury to the cornea; on the contrary, very great comfort and improvement in every respect. In fact, even in infants, I have found the use of Beta-Eucaine to be absolutely non-irritating, safe, and recommendable. When not used in too great strength, it possesses many advantages over any other anæsthetic, whilst not lacking any of their advantages or reliable qualities. I believe it to be an extremely useful and reliable anæsthetic, and obtainable at a moderate price, so that it can be fairly tried in working-class practices as well as amongst the better classes.

Case XIII.—J. W., labourer, Cleobury Mortimer, Salop, in the employment of Messrs. Morrison & Mason, Glasgow, contractors for the new Birmingham Waterworks, in the beginning of August this year was suffering from severe otitis, with sleeplessness, headache, and loss of appetite. I treated him with M. sod. rhæi c. gent. co. et liq. m. pip., and with a 5 per cent. solution of Beta-Eucaine applied in the ear on cotton-wool, with the result that the pain entirely disappeared in thirty-six hours, and has not returned, nor has he at any time since required to be off work from this or any other cause.

A CLINICAL REPORT ON GUDE'S PEPTO-MANGAN.

BY SAMUEL WOLFE, A. M., M. D.,

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There may still be some doubt whether manganese is a normal constant constituent of the human blood

or of any of the tissues of the body. It may not have been positively determined whether iron, when given in an inorganic compound or in pure metallic form, is absorbed by the mucous membrane of the stomach or intestinal canal, or whether it accomplishes its curative work by some occult process of stimulation of that membrane, by virtue of which it takes up with greater readiness the nutritive portions of food substances which are presented to it at the same time; or whether it plays a chemical role in changing the contents of the alimentary canal, so that what eventually passes into the circulation is more fitted to maintain high standards of nutrition or will prove less deleterious to the processes of life.

Even when we have combinations, which, whether obtained synthetically or analytically, resemble the forms in which this metal is found in the blood, our assurance is by no means perfect that they can pass the portals of the circulation, the absorbent organs of the alimentary tract, without great risk of change from their original forms, in their contact with the substances and tissues to which they are exposed.

All these are still questions, on some of which the evidence is sufficiently positive to leave but little doubt, while on others there are so many theories that we are left to choose what may best suit the results of our own observations, if not, indeed, our caprice or fancy.

To the chemist and the therapist, these are certainly interesting and practical questions. Before the physiologist and pathologist still others of equal importance loom up. What are the different steps in the process by which an atom of iron, in either a

food or drug, because ultimately an ingredient of the hæmoglobin of a corpuscle, and what have been the dynamic processes with which it has associated itself up to this point? Again, what is its final destination and disposal? With what materials has it been combined, and what forces has it generated and modified by the time it has finished its course? What accounts for its disappearance under certain abnormal conditions, and why does the train of symptoms which we witness arise under these circumstances?

Again, these are facts, theories, hypotheses and speculations which we are bound to consider, and, in the light of our own reason and judgment, to determine.

But while we are thankful for all the light that can be shed on these problems, and, as members of a cultured profession, are impelled to continue their investigation, yet to the clinician their solution is not essential. Whether his path be flooded with the brightness of midday or shrouded in Egyptian darkness, he must still walk on in it. When, in the records of professional literature or in the acquirements of his own personal experience, certain means have associated themselves with consequent legitimate ends, it is his plain duty to adapt the one to the other. And, again, where the means have been to a degree inadequate, on the introduction of what appeals to his reason as of a higher probable power, he must determine the claim. The clinician must not allow himself to be diverted too far into the by-paths of knowledge, lest he become timorous and undecided. The locomotive engineer, who knows the management of his engine in such a way as to start

it, regulate its speed and stop it, so that he will constantly carry his train to its destination on time and without accident, and with the accomplishment of all that is expected of him at the termini and at the way-stations, is but little the better for a complete knowledge of the country through which he travels; of the industries of the towns at which he stops; of the mechanical and physical forces which rule the movements of his engine; or of the mathematical rules which govern the construction of the road.

My observations with Pepto-Mangan, introduced to the profession by Dr. Gude, chemist, of Leipzig, are such as can be easily confirmed by any physician, since they were all made in private practice, and rest on bedside and office notes. I have used the preparation to a considerable extent ever since it was first brought to my notice, which I think was about two years ago. Owing to some specially good results obtained, I was led to the series of recorded observations on which this paper is based. They extend over four months of time, and embrace about fifty cases.

As a rule, I followed the directions issued by the manufacturers in its administration, giving to an adult a tablespoonful dose and to younger subjects a proportionate amount. Milk seemed to be the best vehicle, and immediately before or after meals a convenient time. In its relation to food, however, I do not think we need exercise any special care as to its administration. There are but few cases in which I found any disturbance of the digestive functions by these doses, but in several there was considerable constipation induced, and in one or two some diarrhoea as the apparent result of the drug. While my experi-

ments in this direction have not gone far enough to beget firm convictions, I am of the opinion that in the main, equally good results could be achieved by a smaller average dose, and in this way the small number of untoward results might probably be still further diminished.

In one series of twenty-three cases the patients were all married women, ranging from the ages of twenty-two to seventy, who were more or less anæmic from various causes. In all but five the results were decidedly satisfactory, and of these one failed to report the second time, so that the result is not known. The other four were cases of advanced organic disease, in which no therapeutic procedure could have given decided results. In nine of the twenty-three cases the results might be classed as brilliant. In all of the others I am convinced that no other preparation of iron could have done more. The condensed details of a few illustrative cases from this series follow.

A woman of 65, during several years, had occasionally applied for relief from vertigo, frequent attacks of palpitation and general weakness and nervousness. She also had frequent long-continued attacks of diarrhoea and some gouty manifestations in the joints. In November I found her very decidedly prostrated and anæmic. She took the Pepto-Mangan in connection with a carefully regulated diet (chiefly albuminous) for six weeks and gained steadily in strength and weight. At the end of that time her symptoms had disappeared, and she claimed to be in better condition than at any time during the previous two years.

A woman of 25, of highly nervous temperament, cultured and refined,

had passed through her first confinement in May, the labor being a very difficult one, and resulting in a still-birth. She grieved very much, and though fighting bravely against her depression of spirits, by autumn she became very neurasthenic and anæmic. She had morbid fears, frequent flushes, and some menorrhagia. She was put to bed and given Pepto-Mangan and strychnia sulphat in gr. 1-30 doses b. i. d., and recovered rapidly. She again became pregnant, and is perfectly well.

A mother of three children, aged 32, the youngest ten years of age, who has during the last year had some three or four attacks of menorrhagia, had gradually reached a quite profound state of anæmia in spite of plentiful administration of other forms of iron in the intervals of the menses. She is obstinately persistent in refusing a uterine examination, and was therefore treated symptomatically only. My recent prescription of Pepto-Mangan had rapidly dissipated her pallor and improved her general health.

A primipara, aged 22, was pale during pregnancy, and at the end of of her lying-in, though she had not lost blood at all profusely, and claimed to feel well, was very pallid. After using the Pepto Mangan for two weeks her color had been fully restored.

Two young married women, both of whom had passed through a confinement within a year, were anæmic, and frequent sufferers from headaches, and considerably debilitated. They both recovered promptly on the Pepto-Mangan.

Another series of nine cases consists of children from infancy to the age of 12. In all, marked results were obtained.

A little girl of 4, for two successive summers had frequent malarial attacks of an irregular character and resulting in anæmia and debility. She had been treated with arsenic, quinine, various preparations of iron, and though responding to the drugs, was still inclined to fall always a ready victim to fresh onsets of the disease. On Pepto-Mangan she made steady and rapid progress toward robust health, and now is a perfect specimen of a vigorous child.

An infant of seven months passed through a siege of infantile remittent with a great deal of bowel disturbance, which yielded to quinine in the course of two weeks. Within a month the same train of symptoms developed, and quinine was again given, and followed by Pepto-Mangan, and since then the child's health has remained good, although several months had elapsed.

A girl of 7, who had for a long time been pale, took diphtheria. After recovery from the disease, the anæmia, as might be expected, was still more grave. She was put on Pepto-Mangan and soon became rosy and strong.

Another girl of the same age, also habitually pallid, had wryneck for two weeks, which disappeared under iodide of potassium, but the anæmia had increased. Her restoration in color and to robust health was secured by the use of Pepto-Mangan for a month.

A little boy of 4 had measles, from which he made a good recovery. Two months later he was very anæmic and listless with poor appetite and slight feverishness. He at once improved on the Pepto-Mangan, and continued until fully restored.

A baby, six months old, one of a pair of twins, had developed a quite marked degree of hydrocephalus.

Large thin blue veins stood in relief all over the scalp. The anæmia was very pronounced. She was put on Pepto-Mangan, and her appearance now is much better, with strong indications of the arrest of progress in the disease.

Another series of five cases includes girls approaching, or slightly beyond, puberty, all anæmic, and all responding to the use of Pepto-Mangan.

On this class, a girl of 17, who has always been pale, thin and puny, had only come under treatment within a month. She has never menstruated, and shows but little tendency to don the usual physical habiliments of the maiden. She is under size, but has since her early girlhood always had an aged look. Her appetite is very meagre and somewhat capricious. She suffers from pains in the legs, more especially the joints, and has a distinct systolic murmur. Under the Pepto-Mangan she seems disposed to gain in color and appetite, and the pains in the legs have somewhat diminished. I shall watch the outcome of this case with great interest.

In submitting this report, I wish to summarize these conclusions:

That Pepto-Mangan is a highly available preparation of iron, on account of its liquid form, pleasant taste, non-corrosive action on the teeth and unirritating effect on the digestive organs, admitting thus of easy gradation of dose, easy administration to children, and avoidance of unpleasant effects in all classes of patients.

That it is an efficient and rapid restorer of the normal quality and quantity of the blood, in all conditions where the state of the organism admits of this result by the administration of a chalybeate.

GOUT AND RHEUMATISM.

BY W. H. WALLING, M. D., PHILADELPHIA.

Osler defines gout as a "nutritional disorder, associated with an excessive formation of uric acid, and characterized clinically by attacks of acute arthritis, by the gradual deposition of urate of soda in and about the joints, and by the occurrence of irregular constitutional symptoms.

"It is now generally recognized that the disease depends upon disturbed metabolism; most probably upon defective oxidation of nitrogenous food stuffs."

Gould says that "gout is a constitutional disease characterized by an excess of uric acid or alkaline urates, especially sodium urate, in the fluids of the body. Sodium urate is first deposited about the articular surfaces of the small joints, but in time the arteries, cardiac valves, and the connective tissue of the kidneys may be involved. The metatarso-phalangeal joint of the great toe is, curiously, the favorite point of attack, and the helix of the ear is another favorite seat. Tophi form about the affected part. To diminished solubility of the urates, due to increased acidity of the blood; to increased formation of uric acid and failure in function of the kidneys; to persistent plethora of the digestive organs, is variously ascribed as the cause of gout. The symptoms of the acute form are malaise, intense pain in the affected part, with swelling and redness, pyrexia, chills, scanty and acid urine, irritability and sleeplessness. The paroxysm usually occurs at night. Other attacks almost invariably follow at regular intervals.

Gout is stated to be hereditary, as in about fifty per cent. of all cases, the

parents or grandparents were afflicted with the disease.

The influences, however, most liable to result in this disorder may be attributed to the use of alcohol, especially ale and beer, as the latter tend to produce an acid dyspepsia. Excessive beer drinking, coupled with poor food and defective hygiene, produces what is termed "poor man's gout." The excessive use of red, or butcher's meat, is also a factor in the production of gout.

RHEUMATOID, ARTHRITIS, OR ARTHRITIS DEFORMANS.

This is a chronic disease of the joints, characterized by changes in the cartilages and synovial membranes, with periarticular formation of bone and great deformity. This disorder, for a long time believed to be intimately associated with both gout and rheumatism, is not now so regarded. It may, in some cases, seem difficult to disassociate the two, but the more common opinion seems to be that it is of a neuro-trophic origin. Mental worry, grief and anxiety are prominent factors in its production. The mental states are reflected upon the body, and retard or promote metabolism and nutrition as the case may be.

The changes in the joints in this disease differ from those of gout in the absence of deposits of urate of soda, and from chronic rheumatism by the existence of extensive structural alterations, especially in the cartilages. In this disorder, new bone may form, completely locking the joints, not by a true bony ankylosis, but by the osteophytes or bony outgrowths or nodosities which surround the articular surfaces, like ring-bone in horses.

Some cases suffer but little pain, no

matter how great the deformity, while others suffer severely. In some the disease may be limited to a few joints, while in others all the articulations of the body may be completely locked.

CHRONIC RHEUMATISM.

This condition generally comes on insidiously. The synovial membranes are injected, but there is not generally much effusion.

The capsule and ligaments of the joints are thickened, and the sheaths of the tendons in the neighborhood undergo similar alterations, so that the free play of the joint is greatly impaired. In long-standing cases the cartilages may also undergo changes, and may show erosions. Ankylosis may occur and ultimately the joints become very much distorted. The general health may be seriously involved, and valvular lesions, due to slow sclerotic changes, are not uncommon.

Eminent authors state that the majority of cases resist all the old methods of treatment.

MYALGIA OR MUSCULAR RHEUMATISM.

A painful affection of the voluntary muscles and of the fasciæ and periosteum to which they are attached. The affection has received various names, according to its seat, as torticollis, lumbago, pleurodynia, etc. Many writers claim, perhaps correctly, that myalgia is a neuralgia of the sensory nerves of the muscles, but it is generally classed as a rheumatic affection.

Myalgia may follow exposure to draughts of air, as from an open window, especially if upon a railroad car. Persons suffering from the form of myalgia called lumbago, are very apt to think that their kidneys are affected, and that the pain is induced

by such lesion. It may be broadly stated, however, that aside from the presence of a renal calculus or inflammation accompanied with fever, pain in the back has no reference to the kidneys.

TREATMENT.

Impaired nutrition with a faulty metabolism being the prime factors in the causation of the diseases under consideration, it is the object of treatment to restore the one and remedy the other. Alkalies, the salicylates, (which should be cautiously used), iodide of potassium, colchicum and guaiacum have been the remedies heretofore mostly depended upon for drug medication. That some one or more of these remedies may be useful at some stage of the disease is evidenced by experience, but they may easily be pushed too far. The proper application of electricity, massage, dry hot air with a Massinger cabinet and bath, and mild alkaline water with proper attention to elimination by the kidneys and bowels, are all most excellent measures to carry out according to indications. Diet plays an important part in all debilitated conditions, and in none more so than in gout and rheumatism. The tendency is to restrict the diet too much. A fairly liberal regimen should be allowed, even a little stimulation may at times be advisable, but all malt liquors should be disallowed.

The prevailing idea that red meat is to be prohibited in these diseases is not tenable. A proper allowance of such articles of diet will in most cases be beneficial. It is the excess that is injurious.

The writer has found the internal administration of aspirin in ten to fifteen grain doses, in capsules, three

times a day, after meals, to be very beneficial in rheumatism and even in myalgia. Electricity has also been a favorite remedy, giving in many cases the most happy results.

The injection of animal lymph has recently given surprising results in old chronic conditions, resisting all other forms of treatment. The theory, sustained by practical results, is that the lymph is essentially a cell food, and rapidly restores lost function. It is the primary cell that sustains life, and if it be kept in good condition, or restored when impaired, the functions of the body will be rhythmically carried on. The lymph is to be injected into the gluteal muscles or other deep parts, in doses of five to ten or more minims once or twice per day, with or without baths, electricity, etc. The diet should be regulated in accordance with the needs of the patient, and a reasonable amount of active or passive exercise be prescribed and enforced. With these measures faithfully carried out, there is hope in so-called "hopeless" cases.

In enlarged joints, the cataphoric use of lithium citrate has also been of great benefit in the writer's hands. The joint is either immersed in a strong solution or wrapped in absorbent cotton wetted in the same, the anode of a galvanic series applied, and a current of twenty to thirty milliamperes passed for ten to twenty minutes, sittings to be held every day or every other day, as deemed best.

In some conditions a solution of potassium iodide may be applied, using it, however, with the cathode. Inflammatory products are absorbed and stiff joints rendered mobile.

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ORIGINAL ARTICLES of practical utility and length are invited from the profession. Accepted manuscripts will be paid for by a year's subscription to this journal and one hundred extra copies of the issue in which such appears if desired.

Editorial.

SMALLPOX IN BOSTON.

The increase in the number of small-pox cases in this city is not enough to justify anything like a panic, but it is ample to point the need for all judicious vigor in the way of prevention. The recommendations of the board of health are timely, and should command the heed of citizens who are in any respect derelict. Unless prompt protective measures are taken, there is reason to fear, not that there will be an epidemic of the awful disease, for that is impossible here, under existing conditions; but that the spread of the disease will be so considerable as to cause the loss of many lives which might be saved, and to create in uninformed minds a state of anxious terror which is not only an evil

in itself, but is one of the strongest causes tending to aggravate any disease from which the frightened patient suffers. There is no doubt that many a person has died from smallpox who would have lived had not his nerves been paralyzed by panic.

There is reason to believe that there are in this city several thousand people above the age of early childhood, who have not been vaccinated. There is also reason to believe that a still larger number of our resident population consists of persons who, though they were vaccinated many years ago, are not now in anything near the same condition of immunity from smallpox that they would be in, if they were re-vaccinated.

Most of our readers know, probably, that there has grown up a zealous anti-vaccination propaganda. It flourishes in Boston like a green bay tree—or like a noxious weed. The reader can choose his own comparison. Anyhow, this anti-vaccination propaganda is very persistent, very confident in assertion and pours out its literature with a profusion which indicates that its treasury is as inexhaustible as its vocabulary.

The Boston Medical and Surgical Journal, for mid-October, contains an article under the caption "Vaccination: A Preventive that Prevents." The Journal prints a facsimile of a report made by the Boston board of health in 1802 when vaccination was comparatively in its infancy. The report is given in the somewhat quaint typography of that period. It is signed by a number of the most distinguished physicians who were living and practising in Boston in 1802. An elaborate system of experiments, carried on under the supervision of the board for the purpose of

testing the efficacy of Dr. Jenner's discovery, had just been completed. The report is exultant.

Yet it is certain that if Boston physicians of similar eminence were now, after the lapse of almost 100 years, to declare, over their signatures, what their own opinion is, and what the concurrent opinion of the profession as a whole is, the report would be, if possible, still more exultant.

The above may be applied to Philadelphia as well.—PHILA. ED.]

NEW REMEDIES.

The Medical Journals teem with advertisements of new remedies, or the rearrangement of the older ones, that render them new in therapeutic effect. At times this rapid multiplication of drugs, and their application seems perplexing. There are so many good remedies from which to choose, and the strong terms in which most of them are commended by different writers, would be confusing were it not for the fact that the wide-awake physician treats the patient and not the disease. In looking over a book upon therapeutics, the writer found no less than 180 remedies for rheumatism alone. This would seem to imply that none of them were really effective. Our homeopathic friends have as many remedies as there are symptoms; but do not all schools pay too much attention to symptoms and too little to general principles in treatment?

The multiplicity of remedies is right and proper; the administration of the right remedy at the right time is the thing for the discriminating physician to do.

In order to do this, a careful study

of the action of remedies should be made. There is not sufficient attention paid to this phase of the subject by many of our practitioners. We do not wish to be understood as in any way deprecating the introduction of new remedial agents; yet it is well not to form too hasty a judgment as to effects. This has been very forcibly illustrated in the failure of Koch's tuberculin and some others that might be mentioned.

These very failures however, taught the profession many useful lessons.

The tendency is either to a too enthusiastic reception of a new remedy, or on the other hand of a too radical condemnation of the same. Let us be earnest seekers after truth, yet reasonably conservative in the application of sufficiently untried preparations. Laboratory effects are not always realized at the bedside. This has been well shown by the laboratory experiments with piperazin as a solvent of uric acid. What so readily took place in a test tube, was thought to be evidence that the same would produce the same result in the patient, but disappointment followed its administration. Other and similar results might be presented, but this will suffice as an illustration of the difference between laboratory experiments and bedside practice.

We want new remedies, and their name is legion; but we also want a careful discrimination as to their application in practice. Medicine will the nearer approach an exact science as we more carefully study our remedies and the clinical results, in actual therapeutic as well as physiologic effect. Hasty conclusions, based upon insufficient data are not only misleading, but too often disastrous.

W. H. W.

LIME IN THE EYE.

Schmidt Rimpler, in *Berliner Klinische Wochenschrift*, states that in these cases by some means the eye should be opened so that every particle of the calcium can be carefully removed from the cornea and conjunctival sac. Removal is best accomplished by the use of oil. A bit of cotton can be saturated and used to wipe out the particles. It is especially important to evert the upper lids, as particles are prone to become imbedded in them. To relieve the pain, cocaine is recommended, and the eye should be thoroughly flushed out with oil. If no oil can be found, water may be used, for as a rule, the calcium has been dissolved and water causes no rise of temperature. The prevention of these accidents is highly important, and the use of protective spectacles by workers in calcium is recommended.

Stutzer, same journal, says, that when an eye has been injured by lime the best method of treating the condition is to immediately cleanse the eyes with copious washings of clean water, which should be kept up for a considerable length of time. This is really "a first aid to the injured" method as it can be readily carried out by the patient's fellow-workers. It can easily be done by one man holding the injured eye open, while another, with a clean glass and clean water, washes the eye until no particles of mortar can be seen therein.—*Red Cross Notes*.

[Vinegar dropped into the eye will at once neutralize the alkali of the lime, and afterwards the above treatment may be carried out.—ED.]

BOOK REVIEW

THE PHYSICIAN'S POCKET ACCOUNT BOOK,

Consisting of a manilla-bound book of 208 pages and a leather case. By J. J. Taylor, M. D. Price, \$1.00 complete. Subsequent books to fill the case, 40 cents each, or 3 for \$1.00. Published by the Medical Council, Twelfth and Walnut streets, Philadelphia.

This book is very conveniently arranged for the use of the physician, enabling him to easily keep and render a statement of his accounts, and is legal in form, which is of great importance in case a bill is disputed by a patient or it should become necessary for anyone except the doctor himself to collect the charges.

The name of Dr. J. J. Taylor as arranger and publisher is sufficient guarantee of its completeness and adaptability for the intended uses. We cordially commend it to the profession.

OPHTHALMOLOGY

In charge of J. A. TENNEY, M.D., Boston.

Dr. Edward Stieren reported at the last meeting of the Pennsylvania Medical Society an interesting case of gumma of the ciliary body, in which vision was lost in the affected eye. Seven hundred and twenty grains of potassium iodide were given daily, and after some months vision in that eye was brought up to six-eighths.

Dr. Norburne B. Jenkins (Med. News) calls attention to the fact that

pupillary contraction is probably a greater aid in reading than the forward movement of the lens. He thinks the narrow pupil sometimes seen in old age is an evidence of eye-strain.

Dr. S. Busby Allen (Med. Record) suggests injections of hot water into Tenon's capsule in posterior inflammations of the eye threatening loss of vision. He injected water at a temperature of 116° F. under the capsule in the eyes of rabbits for fifteen minutes at a time daily, for a period of four months. The eyes were then examined by experts, and no changes were found to have occurred in the eyes or in any of the media.

Major F. P. Maynard, F. R. C. S. (Brit. Med. Jour.), describes the cases of 12 patients who had the plague in Patna with eye complications. Six recovered with one eye sound. In the remaining 18 eyes, the cornea was hazy in 4, opaque in 2 and sloughed in 4. Iritis in greater or less degree was present in 12 cases, and in three others the iris was prolapsed. The media were hazy in 6. The tension was diminished in 12 cases, normal in the rest. There was no vision in 5, light perception only in 8, and fairly good vision in 5.

J. Piotrowski (Centralb. f. Gynakol.) advises the use of protargol to prevent suppurative inflammation in the eyes of the new-born infant. He cleanses the lids with a three per cent. solution of boric acid, and then drops a ten per cent. solution of protargol into the conjunctival sac with a glass dropper. In a series of 1,030 cases treated in this way there was not a case of blennorrhoea.

Dr. Howard F. Hansell (Am. Med.) contrasts German methods with those of America. He says in many of the

German clinics, the trial methods in refraction in use twenty years ago are still popular; no mydriasis, no retinoscopy; no astigmatic charts. Prof. von Hippel's service in Göttingen is a notable exception. He was especially interested in extirpation of the lacrymal sac, which is frequently done there, when probing fails to cure. The sac is removed entire and the wound closed without packing or drainage by superficial sutures.

Dr. Henry B. Lemere (Am. Med.) calls attention to the dangers attending the use of adrenalinchlorid in diseases of the eye. One drop of a 1-1000 solution dropped into the conjunctival sac will blanch the eye in thirty seconds. If the iris and ciliary body are free from engorgement, no harm will be done by congesting deeper structures; but he cites three cases in which positive harm followed its use. One was a case of corneal ulcer, and the other two were cases of iritis. The ulcer was complicated with iritis, after the instillation of adrenalin; and the iritis cases were progressing favorably until the adrenalin produced acute exacerbations of inflammations and adhesions. When adrenalin is indicated, its effect is increased by the use of boric acid solutions.

EUCAIN HYDROCHLORATE may be combined with two per cent. sodium sulphate for subcutaneous injection. For application to mucous membranes when local ischæmia is desired it should be followed by, or combined with, suprarenal extract.—Wingrave, *Medical Record*, May 4th, 1901.

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Miscellaneous.

IN *The Laryngoscope*, October, 1900, Dr. Joseph S. Gibb, of Philadelphia, Laryngologist to the Episcopal Hospital, etc., publishes a paper on "Carcinoma of the Larynx, Laryngeotomy," which was read before the Annual Meeting of the American Laryngological, Rhinological, and Otological Society at Philadelphia, June, 1900. He reports a case of his own which was operated on by Dr. G. G. Davis, Surgeon to the Episcopal Hospital, on March 15th, 1900. No general anæsthetic was employed, Eucain solution, boiled, being injected with a sterilized hypodermic syringe. Seventy-five minims, or three syringe-fuls, were used during the operation. On incising the trachea, Eucain was injected, and after the tube was well opened, more was injected into the posterior wall. The patient died of sepsis upon the fifth day; but the author believes, with Lennox Browne, that every case of carcinoma of the larynx should be reported.

VACCINE VIRUS.

In a paper read before Lancaster County Medical Society, by Dr. H. M. Alexander, of Marietta, Pa., among other interesting points, he emphasized the following:

Vaccine Virus can be procured from what might be called, perhaps, three sources. The first is the Crust, which is decidedly objectionable, as it has been exposed to stable debris, is loaded with saprophytic bacteria (which are always found in the atmosphere) and hay bacillus, while the under surface is filled with pus cells by coming in contact with the pus layer. Portions of the Crust, es-

pecially the under surface, are very rich in vaccine corpuscles, and this is the reason why physicians so frequently claim that it is better than the other forms. The abundance of vaccine corpuscles enables them, with more careless operating, to vaccinate successfully; but they have as a result, many very violent inflammations, due to the dangerous bacteria which they have inoculated therewith.

The second source is what many bacteriologists call the Pus Layer. It is made up of broken down epithelial cells, vaccine corpuscles, etc., and found between the crust and the surface of the vesicle. It is undoubtedly the richest of all products, and if properly applied, extremely certain to produce a vesicle of some kind; but it is extremely dangerous, and we are sorry to say that from it most of the Fluid Vaccine on the market is produced to-day. Heretofore it was cast away as a dangerous product!

The third source is that which extends like drops of perspiration, after the Crust has been removed, the dangerous Pus Layer sponged away and the animal properly prepared with aseptic precautions in a clean, disinfected operating room. This Lymph, never having been exposed to atmospheric influences, is undoubtedly the safest. It is not quite so rich in vaccine corpuscles; therefore, requires a little more care in its application to insure success; but when success is attained with this form, it is not with the accompanying dangers and the very frequent undesirable results which attend the use of either of the other two. We feel that this is the only product that should be used, and it is this serum which is and has been used for coating Ivory Points, and which is known as the American form of Dried Lymph.

I can clearly demonstrate, or you can for yourself, by experiments on animals, as well as on the human subject, that if you continue to propagate the disease from one animal to another, or from one individual to another, by mixing the seed lymph with glycerine so as to prevent its drying, that it will very soon become exhausted. After you have had inflammatory results that are not protective, but are mischievous, you will have deep ulcers, confluence, and in some cases malignancy. At the same time you can take the pure lymph, dry it on Ivory Points, use it after five, ten or fifteen days, and you can continue to develop a true vaccine vesicle, and a protective one, with the true areola and constitutional symptoms, through thousands of subjects. This may not be in accord with the theorizing of bacteriologists, but it is clinical experience, tried and retried.

QUINIC ACID AND GOUT.

BY DR. DE LA CAMP, ASSISTANT AT
THE CLINIC.

(From the Second Medical Clinic of Berlin University, Director Professor Gerhardt, Medical Privy Counsellor. Abstracted from the *Munchener Medicinische Wochenschrift*, July 23, 1901.)

Two years ago Weiss announced as the result of his experiments that quinic acid lessened the excretion of uric acid and increased that of hippuric acid in the human subject, and he recommended it as a therapeutic and prophylactic remedy in the uric acid diathesis, and more especially in gout. Combinations of quinic acid with other remedies for gout, such as citrate of lithium, piperazin, etc., have

been recommended by various observers; and Nicolaier has recently experimented with one with Urotropin, called Chinotropin.

In spite of manifold investigations and many theories, we still want an exact explanation of the nature and etiology of gout. Nevertheless, any remedy that will influence a prominent symptom, the pathological accumulation of urates, is welcome to us. There is by no means unanimity as to the action of quinic acid in the human organism. De la Camp has employed Chinotropin for his experiments, preferring that for a variety of reasons to be mentioned later, to the other quimates that have been tried. Two preparations were experimented with: a Chinotropin II, composed of two molecules of quinic acid and one molecule of Urotropin, and Chinotropin III, containing four molecules of quinic acid and one of Urotropin.

The preparations were taken without the manifestations of any unpleasant by-effects at all. The upper limit in amount was 7.5 grams (112½ grains) of Chinotropin II, corresponding to 1.5 grams (22½ grains) of Urotropin. The case consisted of one girl suffering from mild chlorosis and three cases of acute gout. The first case was soon discharged cured. The three gout cases experienced relief under the administration of Chinotropin, and the attacks were shortened to four, six and seven days respectively. The patients had been treated in former attacks with all the various gout remedies, lysidin, piperazin, lithium, etc., and were doubtless well qualified to pass judgment upon the drug.

The reason why Chinotropin, rather than one of the other quimates, was selected by de la Camp, was on account of its combination with Urotro-

pin. As Orlowski and Nicolaier have shown, Urotropin, after its passage through the human body, possesses marked uric acid solvent properties; which are entirely absent in lysidin, piperazin, uricedin, sodium bicarbonate, etc. This property depends upon the decomposition of the Urotropin in the body and the separation from it of formaldehyde, which forms extremely soluble combinations with uric acid. Hence it should be employed for uric acid concretions not only in the urinary passages, but anywhere else in the body where they may be present. A dose of 7½ grams (112½ grains) of Schering's Chinotropin II, containing 1½ grams (22½ grains) of Urotropin and 6 grams (90 grains) of quinic acid is the one that de la Camp recommends as always well borne. He was always well able to demonstrate formalin in the freshly voided urine when Chinotropin had been administered. The excretion, which previously often contained uric acid sediment in large amount, usually came clear by the second day.

Chinotropin is therefore to be recommended for further clinical experimentation as the best gout remedy that we as yet possess. Of course a proper dietary treatment, and the use of carbonated waters, as lately recommended again by Klemperer, must not be neglected.

The author concludes that quinic acid, even in large doses, is harmless. He advocates the employment of the quinate of Urotropin (Chinotropin) because the Urotropin in itself is decomposed in the human body, and gives formaldehyde, which forms readily soluble combinations with the uric acid. And in urinary concretions more especially, Chinotropin is deserving of further experimentation.

THE INTERNAL TREATMENT OF ANTHRAX.

Dr. Fischer, Army Surgeon-in-Chief, Dresden, Germany, records a case in which there was a large anthrax carbuncle occupying the entire right half of the face, and which had been present for three days. There had been repeated chills and high fever; the general condition was bad, and swallowing was difficult. The patient being a sturdy young man, and under hospital supervision, an immediate operation was not done. An intravenous injection of 5 grams (75 grains) of a 1 per cent. solution of Collargolum was administered. His condition improved for several hours, and then became worse than it was before. After the second injection the improvement lasted longer, and after the fourth (he received one injection daily) it became normal. It was especially worthy of notice that no deep necrosis occurred; the board-like induration was entirely absorbed, and fourteen days later only a superficial scab came away. Anthrax bacilli were repeatedly demonstrated, both in the carbuncle and in the patient's blood. He had no other treatment. The case was apparently a hopeless one; and the brilliant, rapid and typical improvement can only be ascribed to the intravenous injection of the Collargolum, which had absolutely no disagreeable by-effects.—*Munchener Medicinische Wochenschrift*, August, 1901.

ARGENTAMINE IN OCULAR THERAPY.

BY DR. A. DARIER.

In the *Revue des Cours de Medecine* Dr. Darier writes as follows, under the heading of "Ocular Therapeutic Lessons:"—

I was induced by the work of Hoor on "Argentamine," published in *Klinische Monats. Blatter* of July, 1896, to make a study of this new silver salt, and began with simple conjunctival affections. Having obtained satisfactory results, and discovering in this new agent qualities which I had not so far met with in any other silver salt, I continued my experiments in more serious cases of conjunctivitis, purulent, granular, and other forms.

I established at once that cauterizations with 3, 5, and even 10 in 100 of Argentamine were far less painful than with an application of nitrate of silver solutions of $\frac{1}{2}$, 1, and 2 in 100, which are equivalent to the above named Argentamine solutions.

Applications of even weak Argentamine solutions upon the conjunctiva instantly produced a lactescent precipitate, which proves that the product is freely decomposed by the tears; but this precipitate very easily re-dissolves in an excess of solution. It is therefore very important to apply this topic more liberally than when employing nitrate of silver. It is a drawback, perhaps, to this new salt that it decomposes freely, and for this reason solutions should not be kept too long.

On the other hand, I have never observed, even with strong solutions, the epithelial desquamation we find when using nitrate of silver, which, peeling in white filaments, detaches in fine membranules that roll up in the inner angle of the eye and produce a bright red colour in the conjunctiva deprived of its stratum of the superficial epithelium.

This influence on the conjunctiva by paintings of nitrate of silver is one of the chief causes of pain, and this may be observed even when very weak

solutions are used. The action of nitrate of silver is, therefore, too caustic and too painful. It destroys the epithelium without making its effects felt in the deeper stratum of the conjunctiva; while, on the contrary, the principal advantage of this new silver salt is its power of penetration, and it therefore deserves our intimate attention.

Chemically, Argentamine is a solution of ethylene-diamine-phosphate of silver (recently the phosphate of silver has been replaced by nitrate of silver), and 10 parts equal 1 part of nitrate of silver. The ethylene-diamine which enters into the composition is an organic base having very little caustic action, but possessing the particular property of re-dissolving the precipitates which form by the contact of nitrate of silver with the tissue. By this means it favors the thorough penetration of the silver salt, and carries its strong bactericidal action into the deepest parts.

Schaffer has proved these facts by his experiments at Prof. Neisser's Clinic, Breslau, and by comparing the penetrating power of nitrate of silver and Argentamine in equivalent solutions. The microscopic slides of the organism so treated by these salts and afterwards brought under the influence of ammonia sulpho-hydrate showed an absolutely superficial black infiltration by the sulphate of silver when the nitrate was used, while the penetration zone was five times deeper on the slides treated with Argentamine.

Continuing his experiments, Schaffer endeavoured to determine the disinfecting and bactericidal power of Argentamine, and compared it with that of nitrate of silver. He found that the antiseptic action of Argentamine

was more marked than that of nitrate of silver in all the organisms which he studied; but what is more important is his distinct statement that "Argentamine kills gonococci more quickly and with greater certainty than nitrate of silver."

Being influenced by these optimistic considerations, for the last eighteen months I have continually used Argentamine in all conjunctival affections where nitrate of silver was indicated. With some patients I used on the one eye Argentamine and on the other nitrate of silver, and after a few days' application of the former I substituted the latter, without the patient's knowledge, in order to observe the effect produced and the sensation caused.

It did not take long to arrive at the conclusion that the application of Argentamine is much less painful than that of nitrate of silver under equal conditions. As for the therapeutic effect, it appeared to me from the beginning that it was no less marked in all cases of conjunctivitis of medium intensity. For the severer cases of purulent ophthalmology it seemed important that I should not publish my experience until it had extended over a period of eighteen months, as the subject is of the highest interest.

My opinion as to the preference to be given to Argentamine is so firmly established that for the last five years I have completely ceased to use the $\frac{1}{2}$, 1, and 2 per cent. solutions of nitrate of silver.

Another silver salt, Argonine, of which 15 parts are said to be equivalent to 1 part of nitrate of silver, and which is a combination of casein with silver, is put forward as a powerful antilemnorrhagic. It is said that it has hardly any irritant properties and

rapidly kills gonococci; but those who have tried it doubt its astringent and anticatarrhal properties, and in the subsequent treatment of blennorrhagia use other astringents. I have not had sufficient experience with this product in ocular therapy, and therefore will not make any observations on the subject.

Zanardi has recommended sulphophenate of silver, which, he says, should possess all the antiseptic properties of a silver salt, with the advantage that it is only slightly irritant, very soluble, and keeps well. He states that he used it with success in chirurgy and ophthalmiatrics, but that he has not published any particulars of the results obtained.

Crede has introduced Itrol, a citrate of silver, which he has used with advantage in the dressing of wounds. Experience with this salt appeared to me to be of interest, because of its probable non-irritant action; it is a fine, almost impalpable powder, and easily applicable in insufflations. The results, however, which I obtained in the powder or ointment form have not presented any advantage over Argentamine.

TWO METHODS OF GARGLING.

By gargling in the usual way, only the upper anterior surface of the uvula and soft palate and base of the tongue are reached. The method of holding the nose and throwing the head well back when gargling enables the fluid to reach every surface of the pharynx.

The value of the two methods can readily be tested by painting the posterior wall of the pharynx with a strong solution of Methylene Blue. After gargling with water in the usual

way, the latter will be perfectly clear and unstained; then let the patient gargle again by the method suggested, and the ejected fluid will be found stained.

READING NOTICE.

The efficacy of mechanical appliances requires study and practical experience. The name of Flavell upon goods is proof that the article is designed especially for its objective treatment. Thousands of physicians testify to the merits and reliable construction of the Elastic Stockings, Abdominal supporters, trusses, etc., made by C. W. Flavell & Bro. 1005 Spring Garden street, Philadelphia, Pa.

OLEAGINOUS SCIENCE.

There have been many reported "strikes" in oils, and now it is asserted by some scientist that petroleum is really a distilled and fossil fish oil! Is it possible that Norway cod are really at the bottom of the Standard Oil Company? Who can say? If science says so, one may go on downing the oil, but there is no downing science.

Hagee evidently believes in science and in oil in the same breath. In any event Hagee's Ol. Morrhuæ Comp. is the outcome of scientific combination and adaptation. Its formula makes it a food of the greatest value in all wasting diseases and low states.

If there is anything better in the market we shall be glad to herald its virtues.—*The Dietetic & Hygienic Gazette*.

THE Hollister Crude Oil Company is offering its stock to investors under an absolute guarantee for the full purchase price, under the following conditions: The price of the stock is one dollar per share, and is issued in blocks of 100 shares or more, stock to be delivered to investors. When the stock is purchased the company will deposit in any bank specified by the investor, a gold bond as security to cover the full amount invested, with the understanding that if at any time within two years from date of certificate of stocks the investor becomes dissatisfied, the gold bond will be delivered as payment upon surrender of the stocks. This gold bond matures in 25 years and draws interest at the rate of 3 per cent per annum, payable semi-annually, and is certified by the California Safe Deposit and Trust Company, one of the leading banking institutions of San Francisco. If, at the expiration of two years, the investor does not wish to surrender his stock, the gold bond is returned to the company and becomes an asset. This offer insures a positively secure, interest-bearing investment, with no possible chance of loss. The Hollister Crude Oil Company was incorporated under the laws of Arizona. The stock is non-assessable, and stockholders can not become liable for any debts of the company. The company has no salaried officers, and every cent received from sale of stock is used in development work, on the company's fine tract of 100 acres, in the famous Hollister district, in San Benito county. The property is located four miles south of the town of Hollister, on the Southern Pacific Railroad, and only 95 miles from San Francisco. Competent experts have declared this land to be rich in oil,

and that every acre of it is in the oil belt and will produce a paying well. The company has an abundant supply of water which decreases the cost of development very materially. All of these advantages help to make the Hollister Crude stock more valuable. Many companies are seriously handicapped by being too far from market with means of reaching it. This company's land adjoins the railroad where switches and tanks can be erected at any point, and within a few hours from the time when the oil is taken from the well, it can be placed in the refinery or in the tanks of the consumers. The company intends to continue developing until it has a large number of wells. Every acre is capable of supporting at least one good well. The product of this hundred acres is sure to be something enormous, and, even at a very small price, the returns will be handsome but the increasing demand for both crude and refined oil is a guarantee that the price of oil will be maintained at a good figure for years to come. After a well is drilled and oil is struck, the cost of production is cut down to the smallest figure. There is nothing to do but let nature act. In any other kind of mineral development the expenses keep pace with and often outrun the returns. In mining, a large per cent of the product of even the best mines is eaten up by the expenses of operating. But in oil production, after the well is bored and cased and the oil begins to flow, there is practically no further expense. It seems that a reliable company could not make a fairer offer than the Hollister Crude is making in its gold bond proposition. If the investor does not gain on his investment, he will surely not lose and he will get 3 per

cent on the money invested. The company's office is located at 308 Market street, San Francisco, Cal. (See advertisement.)

MEDICAL SOCIETY OF THE MISSOURI VALLEY.

The fourteenth annual session of this Society convened in St. Joseph on Thursday, September 19th, President Treynor in the chair. After passing resolutions on the death of the President, the Society adjourned to allow its members to attend the McKinley memorial services. On Thursday evening, the Society boarded a special train of Pullman sleepers for Eureka Springs, Ark., where the annual outing occurred, and the regular programme carried over from St. Joseph was presented: Address of Welcome, Hon. W. M. Brown, Mayor of Eureka Springs; Address on Behalf of Local Profession, Dr. J. B. Bolton; Response on behalf of the M. S. M. V., Dr. V. L. Treynor, President; Dr. Palmer Findley, Chicago, "An Exhibition of Specimens, Illustrating the Cause of Uterine Hemorrhage;" Dr. E. S. Pettyjohn, Chicago, "The Unreliability of Children's Testimony;" Dr. S. Grover Burnett, Kansas City, "Effects of 190 °F. Temperature on Man; the cell lesion; a case;" Dr. H. D. Jerowitz, Kansas City, "Scarlet Fever;" Dr. Charles E. Davis, Eureka Springs, "Some Twentieth Century Thoughts in Medicine;" Dr. William Jepson, Sioux City, "It Is Rational to Operate Upon Every Case of Appendicitis as Soon as Recognized;" Dr. Le Roy Crummer, Omaha, "The Use of Gartner's Tonometer, with Demonstration of the Instrument;" Dr. Charles Geiger, St. Joseph, "Syphilis;" Dr. I. P. Leon-

ard, St. Joseph, "Some Aspects of Syphilis." On Friday evening a reception and ball was tendered the visitors by the local profession and citizens of Eureka Springs, and Saturday was devoted to sight-seeing in the mountains, several tallyho coaches and sixty saddle horses being provided for the purpose. After a sumptuous dinner on Saturday evening, the members left for the return trip, arriving in St. Joseph on Sunday morning. Following is a list of officers elected for the year: President, R. E. Moore, Omaha; First Vice President, A. D. Wilkinson, Lincoln; Second Vice President, M. F. Weymann, St. Joseph; Treasurer, Donald Macrae, Council Bluffs; Secretary, Charles Wood Fassett, St. Joseph. Semi-annual meeting will be held in Lincoln in March, 1902.

MONEY SAFELY INVESTED.

Buy California Rock Oil Co's stock at 20 cents per share. Par Value \$1.00 per share.

This is good advice: if you want to make a large amount of money from a small investment, for it is one of the best oil stocks on the market for an absolutely sure profit and large future income. It has one of the best wells in section 28, Coalinga District, Treas. Co., Cal. The Hanford Oil Co. adjoining us in the same section with two wells paid a dividend of \$1.00 per share in October. Their stock per value \$10.00 per share is selling at \$107.00. This remarkable opportunity will not last long. Forward orders immediately with remittance either by Bank Draft, P. O. Money Order or Express to C. J. Tallon, Fiscal Agent, 308 Market street, San Francisco, Cal. Write for prospectus. Write for particulars.

**CHANGES IN THE MEDICAL CORPS
OF THE NAVY.**

Week ending September 28, 1901.

September 20. Assistant Surgeon F. A. Asserson, Assistant Surgeon J. W. Backus, ordered to the Naval Hospital, Cavite, P. I.

Assistant Surgeon A. E. Peck, ordered to the Manila.

September 24. Assistant Surgeon C. E. Burr, resignation accepted, to take effect September 25th.

Assistant Surgeon D. C. Bebe, detached from the Marietta and ordered home to wait orders, when vessel is put out of commission.

Assistant Surgeon E. J. Crowe, detached from the Castine, when put out of commission, and ordered home to wait orders.

September 26. P. A. Surgeon E. M. Shipp, detached from the Naval Hospital, Cavite, and ordered to the Celtic.

Assistant Surgeon W. L. Bell, detached from the Celtic and ordered to the Naval Hospital, Cavite, P. I.

Assistant Surgeon J. W. Backus, detached from the Naval Hospital, Cavite, and ordered to the Brooklyn.

Assistant Surgeon F. A. Asserson, detached from the Naval Hospital, Cavite, and ordered to the General Alava.

Week ending October 5, 1901.

September 30. Surgeon P. Leach, ordered to recruiting duty at Port Royal, S. C.

October 1. Surgeon P. Leach, order to recruiting duty at Port Royal, S. C., revoked.

October 2. Assistant Surgeon E. J. Grow, order to proceed home, upon detachment from the Castine, modified; ordered to the New York Navy Yard.

October 3. Medical Director J. C. Ayres, detached from the Naval Hospital, Chelsea, Mass., October 15th, and ordered home and to wait orders.

Medical Director D. Dickinson, detached from duty on Medical Examining Board at Washington, D. C., October 10th, and ordered to duty in charge of the Naval Hospital, Chelsea, Mass., October 15th.

Surgeon S. H. Griffith, detached from duty at the Pan-American Exposition, Buffalo, N. Y., October 9th, and ordered to duty as a member of the Medical Examining Board, Washington, October 10th.

Surgeon H. L. Law, retired, ordered to duty at Buffalo, N. Y., in charge of the exhibit of the Bureau of Medicine and Surgery at the Pan-American Exposition, and as attending medical officer at the naval recruiting rendezvous, October 9th.

Assistant Surgeon D. B. Kerr, detached from the Culgoa, when put out of commission, and ordered home and to wait orders.

Week ending October 12th.

October 4th. Surgeon L. L. Von Wedekind, detached from the Puget Sound Naval Station, and ordered home and to wait orders.

Surgeon O. D. Norton, detached from the Monadnock, on reporting of relief, and ordered home and to wait orders.

P. A. Surgeon D. H. Morgan, ordered to the Philadelphia.

P. A. Surgeon A. W. Dunbar, detached from the Naval Hospital, Mare Island, Cal., and ordered to the Puget Sound Naval Station.

P. A. Surgeon S. G. Evans, detached from the Solace, upon reporting of relief, and ordered home and to wait orders.

P. A. Surgeon A. R. Alfred, detached from the Marine Barracks, Cavite, P. I., and ordered to the Monadnock.

P. A. Surgeon J. M. Moore, detached from the Franklin, upon reporting of relief, and ordered to the Indiana.

Assistant Surgeon O. G. Smith, detached from the Alvarado and ordered to the Marietta.

Assistant Surgeon F. R. McCullough, detached from the Philadelphia and ordered to the Naval Hospital, Mare Island, Cal.

Assistant Surgeon J. F. Murphy, detached from the Indiana, upon reporting of relief, and ordered to the Solace for temporary duty, and then to the Marine Barracks, Cavite Naval Station.

Assistant Surgeon W. H. Bell, ordered to the Franklin.

Assistant Surgeon D. G. Beebe, detached from the Marietta, upon reporting of relief, and ordered home and to wait orders.

Assistant Surgeons A. M. Fauntleroy and L. W. Bishop, commissioned assistant surgeons from September 28, 1901.

October 7. Surgeon C. F. Stokes, detached from the Oregon and ordered to the Solace.

Surgeon G. A. Lung, detached from the Marine Barracks, Cavite Naval Station, on reporting of relief, and ordered home and to wait orders.

Surgeon L. W. Spratling, commissioned surgeon from September 28, 1901; detached from the Naval Hospital, Cavite, P. I., on reporting of relief, and ordered home and to wait orders.

P. A. Surgeon M. S. Guest, detached from the Naval Hospital, Philadelphia, Pa., and ordered to the

Solace. October 17th for temporary duty, and ordered to the Cavite Naval Station on arrival on the Asiatic Station.

P. A. Surgeon A. Farenholt, ordered to the Independence.

P. A. Surgeon M. K. Johnson, detached from duty at Guam, on reporting of relief, and ordered to the Marine Barracks, Cavite Naval Station.

Assistant Surgeon C. D. Langhorne, ordered to the Naval Hospital, Naval Home, Philadelphia, Pa.

Assistant Surgeon W. Seaman, detached from the Independence, on reporting of relief, and ordered to the Solace for temporary duty, and ordered to duty at Guam, on arrival at that place.

Assistant Surgeon H. M. Tolfree, detached from the Columbia and ordered to the Solace for temporary duty, and ordered to duty at Guam, on arrival at that place.

October 8. Assistant Surgeon J. B. Dennis, detached from the Naval Academy and ordered to the Naval Hospital, New York.

Assistant Surgeon R. K. Young, detached from the New York Navy Yard and ordered to the Columbia.

Assistant Surgeon R. N. Fauntleroy, ordered to the Naval Academy.

October 9. Assistant Surgeon J. J. Snyder, detached from duty at Poloc, P. I., and ordered to the Naval Hospital, Cavite, P. I., for treatment.

P. A. Surgeon J. A. Guthrie, detached from the New York and ordered to duty at Port Isabella, P. I.

Assistant Surgeon R. K. McClanahan, detached from duty at Port Isabella, P. I., and ordered to duty at Poloc, P. I.

Assistant Surgeon F. S. Asserson, detached from the General Alava and ordered to the New York.

Assistant Surgeon F. L. Benton, detached from the Brooklyn and ordered home.